

WHAT IS CLAIMED IS:

1. A color imaging apparatus, comprising:

analog color imaging signal generating means for generating an analog color imaging signal;

digital component signal generating means for generating a first digital component signal which indicates an image having predetermined angle of view and which has the data rate of luminance data and first and second chroma data being $K \times N:N:N$ ("K" is an integral number more than two and "N" is a natural number) from said analog color imaging signal; and

converting means for converting said first digital component signal into a second digital component signal which indicates an image having the same angle of view as said first digital component signal and which has the data rate of the luminance data and the first and second chroma data being $K \times N/M:N:N$ ("M" is a prime number of $K \times N$) on the basis of a data rate control signal.

2. The color imaging apparatus according to claim 1, wherein:

said converting means generates said second digital component signal by thinning

all the luminance data and the first and second chroma data in lines decided based on said data rate control signal, and thinning only luminance data in said first digital component signal with an interval decided based on said data rate control signal in each line which is not thinned.

3. The color imaging apparatus according to claim 1, wherein:
said converting means comprises

storing means for temporarily storing said first digital component signal generated by said digital component signal generating means; and generates

said second digital component signal by reading the luminance data and the first and second chroma data from said storing means on the basis of said data rate control signal.

4. The color imaging apparatus according to claim 3, wherein
said storing means, comprises

first memory for storing data of odd lines of said first digital component signal; and

second memory for storing data of even lines of said first digital component signal.

5. The color imaging apparatus according to claim 1, wherein
said "K" is "4" and said "N" is "1".

6. The color imaging apparatus according to claim 1, further comprising

input means for inputting said data rate control signal from the external unit.

7. The color imaging apparatus according to claim 1, further comprising

data rate signal generating means for generating a data rate signal indicating the data rate of the luminance data and the first and second chroma data which constitutes said second digital component signal.

8. The color imaging apparatus according to claim 7, further comprising

outputting means for outputting said data rate signal and said second digital component signal to the external unit.

9. A method for generating digital component signal, comprising the steps of:

generating an analog color imaging signal;

generating a first digital component signal which indicates an image having predetermined angle of view and which has the data rate of luminance data and first and second chroma data being $K \times N:N:N$ ("K" is an integral number more than two and "N" is a natural number) from said analog color imaging signal; and

converting said first digital component signal into second digital component signal which indicates an image having the same angle of view as said first digital component signal and which has the data rate of the luminance data and the first and second chroma data being $K \times N/M:N:N$ ("M" is a prime number of $K \times N$).

10. The method for generating digital component signal according to claim 9, wherein

in said converting step, all luminance data and first and second chroma data in lines decided based on said data rate control signal are thinned, and only said luminance data of said first digital component signal are thinned with an interval decided based on said data rate control signal in each line, thereby said second digital component signal is generated.